(54) Title: UPLINK BURST EQUALIZING METHOD IN BROAD WIDE ACCESS SYSTEM

(54) 发明名称: 宽带无线接入系统的上行突发均衡方法



1 START
2 INITIAL TRAINING EQUALIZER
3 CONVERGENCE OR NOT
4 TRANSFER USER DATA
5 BURST DETECTING
6 TIME FREQUENCY SYNCHRONIZING
7 EQUALIZER TRACKING
8 THRESHOLD 2>ERROR RATE>THRESHOLD 1
9 ESTIMATE THE CHANNEL BY THE ZERO CORRELATION OF PILOT CODE
10 USING THE CHANNEL ESTIMATION TO CALCULATE THE INITIAL COEFFICIENT VALUE OF DFE
11 TO PRE-LOAD EQUALIZER WITH INITIAL COEFFICIENT VALUE
12 TRAINING THE DFE WITH PILOT CORD AND PORTION OF USER DATA
13 USER DATA EQUALIZATION
14 ERROR RATE >THRESHOLD 2
15 NO
16 YES

(57) Abstract: An equalizing method of uplink burst in the way of using pre-training sequence and burst equalization together in Broad Wide Access System, that is, before transferring user data, train the equalizer, then begin transferring user data, equalizer track the changing radio channel using the decision user data as reference; If the channel change exceeds the tracking range of equalizer, such as error rate exceeds threshold (1) but not exceeds threshold (2), then performing burst equalizing; If the channel change exceeds the range of equalizing for the equalizer, such as error rate exceeds the threshold (2), then perform training again. The present invention use the combination of pre-training and burst equalization, by setting different threshold to switch, greatly extend the time interval of pre-training process, reduce the number of pre-training, and increase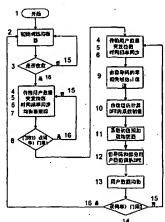 the available band; the increased burst equalizing process greatly reduce the requirement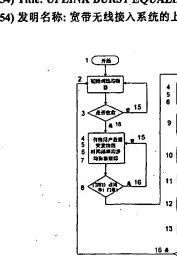 for condition of system (for example, the time interval between statistic channel or burst is very short), which improve the applying occasion of product.

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(57) 摘要

　　一种宽带无线接入系统的上行突发均衡方法，采用预训练与突发均衡相混合的方式，即在传输用户数据之前，对均衡器进行训练，然后开始发送用户数据，均衡器采用判决的用户数据作为参考，对变化的无线信道进行跟踪；如果信道变化超过均衡器的跟踪范围，如误码率超过门限 1 但没有超过门限 2，则进行突发均衡处理；如果信道变化超过均衡器的均衡范围，如误码率超过门限 2，则重新进行训练。本发明采用预训练与突发均衡结合的混合方式，通过设置不同的门限进行切换，使得预训练过程的时间间隔大大延长，减少了预训练的次数，提高了有效带宽；增加的突发均衡处理使得系统对工作场景（如静态信道或突发之间间隔很短）的要求大大降低，提高了产品的应用场景。